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## CLAIMS

1. A composition for selectively blocking water bearing  
subterranean formations, said composition comprising water  
soluble polymers having a linear hydrophilic backbone with  
hydrophobic side groups located at random positions along  
said backbone and functional groups for cross-linking said  
polymers, said composition forming a cross-linked gel in a  
subterranean water-bearing formation.
2. The composition of claim 1, wherein the polymers comprise 0.5  
to 5 mole per cent of hydrophobic side groups.
3. The composition of claim 1, wherein the functional groups for  
cross-linking form part of the hydrophilic backbone of the  
polymer.
4. The composition of claim 1, wherein the functional groups for  
cross-linking form part of the hydrophobic side groups.
5. The composition of claim 1, wherein the polymers have a  
molecular weight of 50,000 or more.
6. The composition of claim 1, further comprising a chemical  
cross-linking agent.
7. The composition of claim 6, wherein the chemical cross-  
linking agent is organic.
8. The composition of claim 6, wherein the chemical cross-  
linking agent is an aldehyde or aldehyde derivative  
comprising at least 5 carbon atoms.
9. The composition of claim 8, wherein the chemical cross-  
linking agent is hexanal or heptanal.

Add A1

Add B1

AMENDED SHEET